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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,559	03/03/2004	Shoichiro Yasunami	Q80212	3278

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EXAMINER

LE, HOA VAN

ART UNIT PAPER NUMBER

1752

DATE MAILED: 01/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/791,559	<b>Applicant(s)</b> YASUNAMI ET AL.	
	<b>Examiner</b> Hoa V. Le	<b>Art Unit</b> 1752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-11 with respect to the elected and applied species is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-4 and 6-11 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

This is in response to Paper filed on 17 November 2005.

- I. The indication of the elected “resin A1-33” is a typographical error. It is --- resin A1-32--- on the record.
- II. On Form PTOL 326, “3)” is correctly checked.
- III. Claims 1-4 and 6-11 are rejected under 35 U.S.C. 102(b) as being anticipate by Uenishi et al (6,489,080).

Uenishi et al disclose and teach a positive resist composition comprising a resin being read on the resins of the A1 with resins c(25, 28, 29, 30, 31 and 32), resins of the A2 with resins c(4, 15, 22, 33, 34, 35, 36 and 37) on columns 37-44, up to 20 wt% of a compound of generating sulfonic acid up on irradiation with active rays or radiation (col.19, lines 7-12) represented by compounds I(1-14), II(1-5) and III(1-8) on columns 11-18, PAG(3-9, 14, 20, 21, 22, 23, 24, 25, 26 and 27), PGA(4-5, 6, 7, 8, 9, 10, 11, 13, 15, 17, 18, 19, 20, 21, 22, 26, 27, 28, 29, 30, 31, 32, 33 and 34), PGA(5-12) and PAG(6-1-15) on the bottom of columns 24-35, a nitrogen containing base on column 65, line 21 to column 66, line 37,

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fluorine/silicon surfactants on column 67, lines 26-35. One or more other types of photo-acid generators including carboxylic acid generator (compound PAG3-16, PAG4(15, 21 and 31) are taught and suggested to be used with the sulfonic acid generator in a ration of 100/0 of the other types of acid generator to sulfonic acid generator on column 18, line 58 to column 19, line 8.

Since Uenishi et al is reasonably disclosed and taught the claimed embodiment as broadly claimed, the above claims are found to be anticipated by Uenishi et al

IV. Claims 1-4 and 6-11 are rejected under 35 U.S.C. 103(a) as Being unpatentable Over Uenishi et al (6,489,080) considered in view of Ishihara et al (2004/0033434).

Uenishi et al disclose and teach a positive resist composition comprising a resin being read on the resins of the A1 with resins c(25, 28, 29, 30, 31 and 32), resins of the A2 with resins c(4, 15, 22, 33, 34, 35, 36 and 37) on columns 37-44, up to 20 wt% of a compound of generating sulfonic acid up on irradiation with active rays or radiation (col.19, lines 7-12) represented by compounds I(1-14), II(1-5) and III(1-8) on columns 11-18, PAG(3-9, 14, 20, 21, 22, 23, 24, 25, 26 and 27), PGA(4-5, 6, 7, 8, 9, 10, 11, 13, 15, 17, 18, 19, 20, 21, 22, 26, 27, 28, 29, 30,

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31, 32, 33 and 34), PGA(5-12) and PAG(6-1-15) on the bottom of columns 24-35, a nitrogen containing base on column 65, line 21 to column 66, line 37, fluorine/silicon surfactants on column 67, lines 26-35. One or more other types of photo-acid generators are taught and suggested to be used with the sulfonic acid generator in a ration of 100/0 of the other types of acid generator to sulfonic acid generator on column 18, line 58 to column 19, line 8.

Uenishi et al do not specify other carboxylic acid generations upon irradiation with active rays or radiation. Ishihara et al at paragraph 0054 is cited to show the known use of the claimed compound for providing a carboxylic acid generating compound in order to reduce a solubility of a resin in formulation a positive resist composition on paragraph 0075.

Since the above references are all related to positive resist compositions, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include an additional compound capable of generating a carboxylic acid upon irradiation with active rays or radiation in Uenishi et al positive resist compositions for a reasonable expectation of further reducing a solubility of the resin when the positive resist composition is exposed to the irradiation as disclosed, taught, suggest and obtained in Ishihara et al.

Applicant's arguments filed 17 November 2005 have been fully considered but they are not persuasive.

Applicants rely on the showings filed in 17 November 2005 to overcome the above applied set of the combined references for the patentability of the claims being acknowledged.

V. The showings under Rule 132 filed on 17 November 2005 has been fully considered but are not commensurate in scope with each of the parameters as broadly claimed in accordance MPEP 716.02 (d).

1. Since applicants rely on the showings for the patentability of the claims, the claims are not given any more or less value than those as shown with respect to the tested (1) composition (the same numbers of chemical ingredients, except of an ingredient that does not alter the chemical composition or reaction, the same tested chemical ingredients or one or more of their adjacent homologues and about the same amount of each of chemical ingredients) since no test to show that the same or about the same result for each and all broadly composition parameters as broadly claimed and (2) processing procedures (diluting with solvent(s) for coating,...) and conditions (amount and type of exposed radiation,...) because no

test to show that the same or about the same result for any procedure and condition parameters as broadly claimed, especially the reported result are on the reacted, cured and developed in to the image pattern but not a photopolymer precursor composition as claimed. Therefore, the tested results as reported have a little to no value on the claimed photopolymer precursor composition. Applicants should and urged to convincingly show other wise the photopolymer precursor composition would have the same or about the same properties or results of the reacted, cured and developed in to the image pattern composition as report. The showings as reported are product claims by process of using. It is set forth the record that the patentability of the product claims has a little to no value by a process of using the product but it would be given full value in a process of making or forming image pattern claim.

2. There is no advantage for the claimed composition (such as stability...) over any of the applied references for the patentability of a react-able and cure-able photopolymer precursor as claimed. It is insufficient and looking for.

3. The showing results are reported on the reacted and cured photopolymer after being exposed a radiation. It is improper. The showing results have limited value to a reacted and cure photopolymer image after being coated in a layer, exposed to the tested radiation and specifically processed in to an image

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pattern or processing type of claims for the specific use of the photopolymer precursor but not a react-able and cure-able photopolymer precursor as claimed.

3. Why is none of the applied Uenishi et al resins not tested as broadly claimed?

4. The broadly claims have not been limited to resin A1-3 and about the tested amount (generally with about + or -3% of the tested amount) unless applicants convincingly show otherwise that no property is altered is shown on the record

5. Why is none of the applied Uenishi et al sulfonic acid generator not tested as broadly claimed?

6. The broadly claims have not been limited to resin B-3 and about the tested amount (generally with about t + or -0.1% of the tested amount) unless applicants convincingly show otherwise that no property is altered as shown on the record.

7. Why is none of the applied Uenishi et al nitrogen-containing basic compound not tested as broadly claimed?

8. The broadly claims have not been limited to tri-n-hexylamine and about the tested amount (generally with about t + or -0.01% of the tested amount)



unless applicants convincingly show otherwise that no property is altered as shown on the record.

For one or more of the above reasons, the showings are insufficient, improper and much narrower in each and all parameters as broadly claimed. It would like to see tested results using 0.01 and 99.5 unit ratio for each and all claimed polymer units of (1)-(2), (1)-(2)-(4), (1)-(2)-(3)-(4) as broadly claimed. The same for the minimum and maximum amounts and ratios of each and all of the claimed chemical ingredients in the composition is urged for a close and proper examination of the broad claims.

V. Claims 1-4 and 6-11 are rejected under 35 U.S.C. 102(a) (as recognized and corrected by applicants) (with (b) being a typographic error, withdrawn) as being anticipate by Ishihara et al (2004/0033434).

Ishihara et al disclose and teach a positive resist composition comprising a resin being read on the resins of the A1 with resins of the formula [11] with  $R^{(12,13)}$  and  $^{14)}$  being hydrogen...,  $R^{(16)}$  being hydrogen...,  $R^{(17)}$  being an alkyl,  $R^{(18)}$  being aralkyl...,  $R^{(19)}$  being a hydrogen...and with r, t and e being natural numbers, a resin being read on the resins of the A2 with resins of the formula [11] with  $R^{(11,12)}$  and  $^{14)}$  being hydrogen...,  $R^{(16)}$  being hydrogen...,  $R^{(17)}$  being an alkyl,  $R^{(18)}$  being an

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alkyl..., R<sup>(19)</sup> being a hydrogen...and with r, t and e being natural numbers on paragraphs 0078 to 0082, 0085 and 0087-0088, formula [12] with R<sup>(12,13,14,16,17, 18 and 19)</sup> being the same as those in formula [11] and with r', t' and e' being natural numbers on paragraphs 0091-0093, 0.05 to 5 wt% of a compound of generating sulfonic acid up on irradiation with active rays or radiation on paragraphs 0065-0070 and 0072, 0087-0088, a nitrogen containing base on paragraph 0114, fluorine/silicon surfactants on paragraph 0117 and from 1-19 wt% of compound capable of generating a carboxylic acid upon irradiation with active rays or radiation on paragraphs 0054 and 0072.

Each and all functional embodiments in the claims, including those in claims 1, 3, 6 and 7 as specifically made the arguments by applicants have been reasonably considered inherent in the absence of a convincing evidence to the contrary in accordance with the authority stated in *In re Schreiber*, 44 USPQ2d 1429.

Since Ishihara et al disclose and teach the claimed embodiments, the above claims are found to be anticipated by Uenishi et al.

Applicant's arguments filed 17 November 2005 have been fully considered but they are not persuasive.

Applicants urge that Ishihara et al disclose and teach the broadly claimed embodiments as not as broad as disclosed and taught their disclosure.

The overly broad embodiments is not applied in the above rejection such as t, r', e being zero on the record.

An alkyl having 1-10 carbons atom is encompassed and anticipated that of 1-5 atoms.

In the absence of convincing evidence to the contrary, the arguments to the functional embodiments in claims 1, 3, 6 and 7 have and given a little value in accordance with the authority stated in In re Schreiber, 44 USPQ2d 1429.

It is submitted that the rejections on the record are not based up on impermissible use of hindsight because they are not depended on any information that can be gleaned only from applicants specification in accordance with the authority stated in In re McLaughlin, 170 USPQ 209.

VI. Urano et al (5,976,759 and 6,656,660) and Sasaki et al (6,727,040) have about the same teachings as those applied above. The are cumulative but may be later applied when a claim is amended.

**VII. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

**VIII.** Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoa V. Le whose telephone number is 571-272-1332. The examiner can normally be reached from 6:30 AM to 4:30 PM on Monday through Thursday and about the same time of most Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 571-272-1526.

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Applicants may file a paper by (1) fax with a central facsimile receiving number 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hoa V. Le  
Primary Examiner  
Art Unit 1752

HVL  
11 January 2006.

HOA VAN LE  
PRIMARY EXAMINER  
*Hoa Van Le*